

REMARKS

In the Office Action, the Examiner rejected claims 1 and 5 under 35 U.S.C. §103(a) as being unpatentable over Han et al., U.S. Patent No. 6,399,421, claim 2 under 35 U.S.C. §103(a) as being unpatentable over Han et al. in view of Orcutt, U.S. Patent No. 5,735,030, claim 6 under 35 U.S.C. §103(a) as being unpatentable over Han et al. in view of Su et al., U.S. Patent No. 6,437,429, claims 12-15 under 35 U.S.C. §103(a) as being unpatentable over Han et al. in view of Orcutt, claims 16, 18, and 19 under 35 U.S.C. §103(a) as being unpatentable over Han et al. in view of Singh et al., U.S. Patent No. 6,031,216, and claim 17 under 35 U.S.C. §103(a) as being unpatentable over Han et al. in view of Singh et al., and further in view of Su et al.

Reconsideration of the application is respectfully requested based on the amendments above and the following remarks.

Claims 1, 12, and 16 have been amended to further clarify the subject matter regarded as the invention. Each of claims 1, 12 and 16 has been amended to specify that the molding cap be made of plastic. Support for this amendment can be found at page 5, line 15 of the specification.

Claims 5 and 14 have been canceled. Claims 1-2, 6, 12-13, and 15-19 are now pending in this application.

TELEPHONE INTERVIEW

The Examiner is thanked for the telephone interview of June 21, 2004. The participants of the telephone interview included Examiner Vu, Supervisor Donghee Kang, and Attorney Phillip Lee. The Han et al. and Singh et al. references and the use of aluminum bonding wires in plastic packages were discussed.

PATENTABILITY OF CLAIMS 1-2, 6, 12-13, AND 15-19

The invention as claimed in independent claims 1, 12, and 16 require the use of aluminum bonding wires that are encapsulated within a plastic molding cap. The Office Action states that it would have been obvious to combine the aluminum wire of Singh et al. with the IC chip of Han et al. to arrive at the claims of the present invention. However, it is respectfully submitted that Singh et al. does not teach or suggest use of its aluminum wires within a plastic molding cap. Actually, Singh et al. does not contain any discussion regarding any type of molding cap. Also, Han et al. does not teach or suggest any use of aluminum wires.

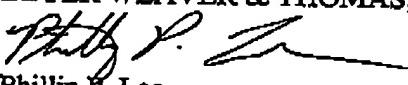
Furthermore, it is generally known that aluminum wires are not used in semiconductor devices using plastic molding caps because aluminum becomes corroded by most plastic molding compounds. Support for this statement is found at page 1, bottom of column 2, of Plastic Packaging and the Effects of Surface Mount Soldering Techniques, by John Barber. Additionally, aluminum wires are not used in plastic packages because plastic injection molding processes cause brittle aluminum wires to break.

In sum, each of Han et al. and Singh et al. do not teach or suggest the use of aluminum wires in plastic packages. Also, there is no teaching to combine Han et al. and Singh et al. to arrive at the use of aluminum wires in plastic packages. Therefore, it is respectfully submitted that independent claims 1, 12, and 16 are patentably distinct from Han et al. and Singh et al. It is submitted that dependent claims 2, 6, 13, 15, and 17-19 are also patentably distinct from the cited references for at least the same reasons as those recited above for their corresponding independent claims. Thus, it is respectfully requested that the Examiner withdraw the rejection of claims 1-2, 6, 12-13, and 15-19 under 35 U.S.C §103(a).

SUMMARY

It is respectfully submitted that all pending claims are allowable and that this case is now in condition for allowance. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

If any fees are due in connection with the filing of this Amendment, the Commissioner is authorized to deduct such fees from the undersigned's Deposit Account No. 50-0388 (Order No. SDK1P007).

Respectfully submitted,
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